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13-08-07 - Solbian to Canvas Installation Guidelines

Although Solbian Flex solar panels are ideal for canvas installation, they must be fully supported for their entire area. The canvas Bimini or dodger surface must be firm and sturdy, some older structures may need to be updated or re-tensioned. It is necessary to prevent any "flogging" in the wind or any excessive movement. One should be able to pull firmly on any corner of the structure and not produce much movement.

Solbian Flex panels are "semi-flexible", not folding or rollable. They can be mounted on curved surfaces as long as they do not exceed a continuous curve greater than 3" over 12" (25% of chord). Nor may they be installed in such a manner that may bend locally or have any kink, such as over a middle support bar in a bimini.

If a Solbian panel must be installed over a crossbar, and if there is any bend in the canvas surface over the bar, then a stiffening backing should be used under the panel. Typically a lightweight twin-wall polycarbonate may be used; however you should contact your distributor for information on backing material.

Zippers or Velcro may used to attach the panels, with the Velcro option recently becoming more popular. Here is an example of a Velcro installation:

Note that the Velcro is both sewn and glued to the panel. Also note that in this case a bit more clearance could have been left between the Velcro and the cells to avoid shading the cells.

Regarding sewing, do NOT sew into the cells, stay 8-10mm away from them. Stitching can be wide spacing, if holes are too close together it can weaken the edge of the panel.

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Example: In the picture below, the panels would be better installed athwartships, in between the support bars, not over the middle bar.

In Velcro installations, the width of the Velcro "hinge" is important. In this diagram at right, note that in figures "A" and "B", the width of the Velcro itself is adequate, but the "hinge" between the two parallel strips of Velcro is too narrow. This prevents the upper flap from properly covering the edge of the panel/Velcro. If the width of the hinge were increased by ½ or so, there would be no problem lapping it correctly. The wider "hinge" would also allow forgiveness in the case of the panel not quite matching the fabric strip dimensions (figure C at right).